Attachment 7: Schedule

The proposed project schedule is shown on Figure Att7-1. The schedule starts in April 2013, with a proposed end date early March 2014. The proposed project length is 49 weeks. We will be able to start with the first task as soon as a contract is signed with the State.

Assumptions made for development of the schedule are:

Task 1: Assessment and Evaluation of Phase I Data

Hours and schedule needed to evaluate depth specific temperature data (Task 1.1) are based on discussions we have had with Dr. Andy Fisher to understand the level of effort required for the number of monitoring points. Five weeks have been scheduled for this subtask, as there will be some back and forth between Dr. Fisher and our consultant, HydroMetrics WRI, during the assessment and evaluation.

Aquifer test analysis (Task 1.2) will take approximately two weeks of full time work. The schedule provides for four weeks of 50% commitment.

Integrating tracer and climate change data with the creek/aquifer interaction evaluations from Tasks 1.1 and 1.2 will take eight weeks of part-time commitment. Dr. Moran is an assistant professor at CSU East Bay and has teaching commitments that will prevent her from working full-time on this project. A graduate student will work almost full-time under her supervision.

Task 2: Integrate the Creek/Aquifer Interaction Results into the Olympic Valley Groundwater Flow Model

Updating and re-calibrating the groundwater flow model will take place over a period of 21 weeks (almost two quarters). The hours estimated are based on HydroMetrics WRI's previous modeling efforts in Squaw Valley. The time commitment over the modeling will be less than 50%. Much of the time will be spent calibrating the model using parameter estimation techniques that can run for a number of days unmanned. The development of model scenarios will require communicating with stakeholders to ensure the scenarios are developed correctly and that all assumptions are acceptable. This will increase the length of time to complete this task, even though active hours are not being billed.

Task 3: Develop Groundwater Pumping Guidelines for Olympic Valley

A four-week period has been estimated to complete the pumping guidelines. Staff time commitment will be less than 50%.

Task 4: Reporting

- Four weeks for the Technical Memorandum on Seasonal Creek/Aquifer Interactions (Task 4.1). Time commitment of staff will be approximately 50%.
- Three weeks for the Technical Memorandum on Pumping Impacts on Squaw Creek (Task 4.2). Time commitment of staff will be approximately 50%.

- Six weeks for the Technical Memorandum on LLNL Temperature Isotope Tracers as they relate to Creek/Aquifer Interactions (Task 4.3). Time commitment for staff will be 50%.
- Four weeks for the Technical Memorandum on the Groundwater Model Update and Scenario Results (Task 4.4). Time commitment of staff will be 60%.
- One day for each quarterly report (Task 4.5), and
- Two weeks for the final report (Task 4.6), with 80% commitment.

Task 5: Administration

Project management will occur throughout the project period. Project administration time by consultants will be limited to a total of 48 hours, which when combined with contract administration time of 8 hours, is 4% of the requested grant amount.

Four meetings are assumed. Two people will attend two of the meetings, and one person will attend the other two meetings. For each meeting, hours for each person amount to 12 hours. This comprises 3 hours preparation time, 2 hour meeting, and 7 hours travel time.

Attachment 7 - Schedule
Olympic Valley Creek/Aquifer Interaction Project Phase II

2012 LGA Grant Application
Squaw Valley Public Service District

ID	Task Name	Duration
1	**Task 1. Assessment and Evaluation of Phase I Data**	**18 wks**
2	1.1 Analyze Depth Specific Creek Temperature Data	5 wks
3	1.2 Analyze Aquifer Test Data	4 wks
4	1.3 Integrate Results from Tasks 1.1 and 1.2 with LLNL Climate Change and Tracer Study	12 wks
5	**Task 2. Integrate the Creek/Aquifer Interaction Results into the Olympic Valley Groundwater Flow Model**	21 wks
6	2.1 Update Conceptual Model	3 wks
7	2.2 Update Input Data	5 wks
8	2.3 Run Model and Calibrate	8 wks
9	2.4 Design and Run Up to Five Model Scenarios	5 wks
10	**Task 3. Develop Groundwater Pumping Guidelines for Olympic Valley**	4 wks
11	**Task 4. Reporting**	**44 wks**
12	4.1 Technical Memorandum on Seasonal Creek/Aquifer Interactions	4 wks
13	4.2 Technical Memorandum on Pumping Impacts on Squaw Creek	3 wks
14	4.3 Technical Memorandum on LLNL Temperature Isotope Tracers as they Relate to Creek/Aquifer Interactions	6 wks
15	4.4 Technical Memorandum on the Groundwater Model Update and Scenario Results	4 wks
16	4.5 Quarterly Reports	3 wks
17	4.6 Final Report	2 wks
18	**Task 5. Administration**	**49 wks**
19	5.1 Project Management	49 wks
20	5.2 Contract Administration	8 wks
21	5.3 Meetings	4 days

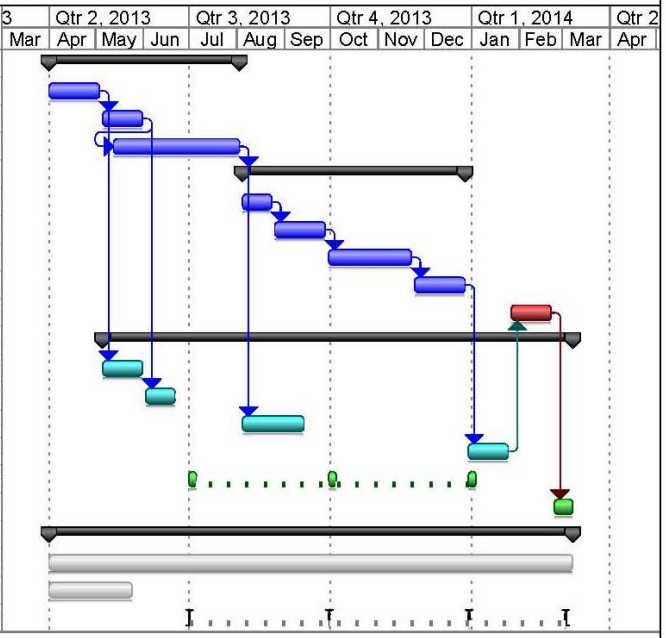

Figure Att7-1: Proposed Project Schedule